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ABSTRACT

This issues paper, eighth in a series of eight, is intended to distill formative evaluation questions on topics that are central to the development of the higher and further education information environment in the United Kingdom. This study focused on the searching behavior of higher education students as they attempted to locate electronic resources. The study was part of a usability study that aimed to evaluate the quality of information environment services. Students were asked to find information on 15 set tasks, completing a questionnaire after each item. Forty-five percent of students used Google as their starting point, and the second most highly used starting point was the university online catalogue, used by 10% of the sample. Nine percent of students used Yahoo and other search engines were used by the rest. Students appeared to like search engines for their familiarity and because they had been useful in the past. Seventy percent of the students thought that they had been successful, and 50% said the search had been easy. A third, however, found it difficult. Results make it clear that more work needs to be done to give students the awareness and skills to use electronic resources other than Google. (SLD)

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How Students Search: Information Seeking and Electronic Resource Use

EDNER Project

Issue&Paper 8

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How students search: information seeking and electronic resource use

EDNER
(Formative Evaluation of the Distributed National Electronic Resource)
Project
Issues Paper 8

Understanding how people use digital resources is critical to the development of usable, useful and pleasant services. It is particularly vital in light of the vast array of electronic resources which higher (HE) and further (FE) education staff and students must negotiate in order to find quality resources which assist them in their task. The work reported here focuses on the searching behaviour of HE students as they attempted to locate electronic services. It formed part of a usability study which aimed to evaluate the quality of IE (Information Environment) services. The latter part of this work will be reported at a later date.

How students search - Where they go first and why
Students were asked to find information on fifteen set tasks, completing a questionnaire after each. Every time they started a new task we asked them where they went first to try to find relevant information. The following presents the most frequently cited starting points:

- 45% of students used Google as their first port of call when locating information;
- The second most highly used starting point was the University OPAC, used by 10% of the sample;
- Next comes Yahoo used by 9% of the students as the first source they tried;
- Lycos was used first by 6%, and
- AltaVista, Ask Jeeves and BUBL were all used as a first resource by 4% (each) of the sample of students.

From these results it is clear that the majority of participants use a search engine in the first instance. Search engines are liked for their familiarity and because they have provided successful results on previous occasions. Individual search engines become "my personal favourite" and phrases such as "tried and tested", "my usual search engine" and "trusted" were frequently given by the students when asked why they chose this source first. Many reasons for students confidence in Google were given, such as "Couldn't think how else to start a search", "Google is always my first choice", "I used Google because of the site's reliability", "I think it is the easiest search to use", "Its better to look on Google than on the library journal search for this one as I wasn't sure of the exact name of the journal".

Of those students who were able to locate a site (including an OPAC where appropriate) which provided them with the information they required only

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12.4% had heard of the site prior to the task, with 57.4% never having heard of it before and 30.2% being unable to find any information.

Perceptions of use - Ease of use
Students were asked how difficult or easy they found each of the tasks:

- 50% responded that they found it easy to locate the required information
- 35% found it difficult
- 15% had no view either way

Perceptions of success
Students were asked how successful they had been in locating the information:

- 70% responded that they were successful
- 30% responded that they were unsuccessful

Even when users can find information it is not always an easy task. This may have serious implications for developers of services as a number of studies (Johnson et al, 2001) have shown that users will often trade performance for the path of least cognitive resistance (minimum effort and time).

How long it takes students to search and why they stop
Students were asked to search for as long (or short) a time as they wanted, with a maximum of 30 minutes to be spent on any one task. The time taken by the majority of participants looking for information was between 1 and 15 minutes. Other research (Craven and Griffiths, 2002) also found that the average time taken to search for information was between 15 and 19 minutes. The DEvISE project (Johnson et al, 2001) found that Efficiency correlated most strongly with General Satisfaction, with Effectiveness second, which may suggest that the amount of time and effort required from the user matters more than the relevance of the items found.

Reason for stopping
Students were asked why they stopped trying to locate information, reasons given were:

- Found information = 70%
- Unable to find website within time allowed = 15%
- Couldn't find a website and gave up = 12%
- Technical problems affected search = 3%

One respondent gave a very simple reason for stopping – 'Teatime!'

Final thoughts
Two results in particular raise very interesting and important issues:

1) Students prefer to locate information or resources via a search engine above all other options, and Google is the search engine of choice and,

2) Whilst half of the participants thought that it was easy to locate information just over a third found it difficult.

Students either have little awareness of alternative ways of finding information to the search engine route or have tried other methods and still prefer to use Google. And, further to this, with a third of the students finding it difficult to locate information (even when using Google) user awareness, training and education needs to be improved. If the IE is truly to be embedded and integrated into teaching and learning further work needs to be done to equip students with the awareness and skills to use electronic resources other than Google.

References

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EDNER Key Issues papers are intended to distil formative evaluation questions on topics which are central to the development of the UK's higher and further education Information Environment. They are presented as short check-lists of key questions and are addressed to developers and practitioners. Feedback to the EDNER team is welcomed.

Please address enquiries and comments to the EDNER Project Team at cerlim@mmu.ac.uk

EDNER is being undertaken by CERLIM at the Manchester Metropolitan University with CSALT at Lancaster University

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